

KCC 4767 (K-C 17,080)
PATENTRemarks

This letter is responsive to the Office action dated November 16, 2004. Claims 11-17, 20, 21, 49, 52, 55, 56, 62, and 63 are amended herein, and claims 10, 58, and 65 are canceled. Upon entry of this amendment, claims 2-5, 7-9, 11-22, 24-33, 35, 37-56, and 61-64 remain pending.

Applicants have invented a new fastening system for an absorbent article which is secure, inexpensive, comfortable, and convenient. A unique feature of one embodiment of the invention is a fastener having active fastening material covering substantially its entire surface. That permits less complexity and improved cost effectiveness than conventional systems which have a patch of material that must be affixed to a portion of a fastener. Another feature is that opposite ends the fastener may be configured differently from one another. Front and back ends are typically exposed to different forces. The present invention permits efficient tailoring of strength capability to meet those forces. That promotes cost-effective manufacturing, conserves materials, and avoids inefficiency. Another embodiment of the fastener is affixed by two types of connectors, including an active fastening material and an adhesive, to augment reliability and keep the fastener flush against the article.

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PATENTI. Response to RejectionsA. Claim 52

Applicants have amended claim 52 herein to clarify differences between the present invention and the prior art, including particularly U.S. Patent No. 5,374,262 (Keuhn, Jr. et al). As amended, claim 52 recites a disposable absorbent article ~~having, among other elements:~~

at least one fastener comprising a single piece of flexible material having an active fastening surface extending continuously thereon, at least a portion of the active fastening surface being located on the fastener for anchoring to said article on landing material located generally at said first waist region and at least one other portion of the active fastening material being located on the fastener for fastening to said article on landing material located generally at said second waist region to secure said article on a wearer, the active fastening surface being covered substantially in entirety by an active fastening material different than said landing material, the active fastening material comprising one of a plurality of hooks and a plurality of loops, the landing material comprising the other of a plurality of hooks and a plurality of loops.

Kuehn et al. disclose an attachment system having a pair of stretchable straps (40) formed of an elastic material. The inner surface of each strap has a loop material attached to an elastic substrate. An adaptor (42) having hooks on both sides connects the strap to a landing pad (44) made of loop material. Alternatively, a buckle (73) and patch (75) of hook material may be attached to the strap (40) made of loop material, instead of being separate like the adaptor (42).

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Kuehn et al. fail to show or suggest a fastener having an active fastening surface extending continuously on the fastener and covered substantially in entirety by an active fastening material different than a landing material on the article. The fastening material on Kuehn's straps is identical to a landing material on the article: both are loops. There is no disclosure of an article having active fastening material that covers the fastener and comprises one of hooks and loops, in combination with landing material comprising the other of a plurality of hooks and a plurality of loops. Kuehn and the other references of record always require a separate piece of hook (or loop) material on the fastener strap to mate with loop (or hook) material on the article. That is exactly what the present invention improves upon. No additional pieces of active fastening (hook or loop) material are needed for the article.

Since the disclosure of Kuehn neither discloses nor suggests the article recited in amended claim 52, Applicants request that the rejection be withdrawn.

B. Claims 2-5, 7-9, 11-22, 53, and 54

Claims 2-5, 7-9, 11-22, 53, and 54 depend directly or indirectly from claim 52, and are patentable for, among other reasons, the same reason as claim 52. Accordingly, Applicants request that the rejections of these claims be withdrawn. Moreover, some of these claims recite additional features not shown or suggested in the prior art.

Claim 7 recites that the active fastening material comprises a plurality of hooks.

There is no motivation in the prior art to cover a fastener with hook material which extends continuously on the fastener and covers the fastener substantially in entirety. The material cost and time for attaching a full-length section of hook

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material to a fastener would lead the artisan to provide small patches, as in Kuehn. Further, the fastening material on each of Kuehn's straps is a loop material, not hooks. Even if the hook adaptor (42) was eliminated, there is no suggestion to place hooks on Kuehn's straps. Rather, there is explicit motivation against such a modification. Kuehn acknowledges at column 9, lines 18-23 that it is preferable that the relatively soft loop material be positioned toward the body of the wearer. Applicants have overcome that problem by providing a hook configuration which is adapted to inhibit irritation of human skin.

Claim 11, as amended, requires that the fastener have an anchor end configured to have a first shear strength and a user end configured to have a second shear strength, the ends differing such that the first shear strength is greater than the second shear strength. That provides a substantial advantage because opposite ends of the fastener may be efficiently tailored to match the differing forces typically experienced between the front and back. Amended claim 12 further recites that portions of active fastening material at the anchor end and the user end have different surface areas. That promotes cost-effective manufacturing and avoids waste of material. In contrast, Kuehn shows a strap with opposite ends which are identical. Claim 14, as amended, requires the surface area of active fastening material at the anchor end have a size about 3 times larger than the surface area at the user end. Claims 13, 15, and 16 recite specific strengths and dimensions. Thus, for these additional reasons, Applicants request that the rejections of these claims be withdrawn.

C. Claims 55, 24-33, 35, and 56

Applicants have amended claim 55 herein to clarify differences between the present invention and the prior art,

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including particularly Kuehn. As amended, claim 55 recites, among other elements:

at least one fastener comprising a single piece of flexible material having an anchor end, a user end opposite the anchor end, and an active fastening surface extending continuously thereon, at least a portion of the active fastening surface being located generally at the anchor end on the fastener for anchoring to said article generally at said first waist region and at least one other portion of the active fastening material being located generally at the user end on the fastener for fastening to said article generally at said second waist region to secure said article on a wearer, the active fastening surface being substantially covered by an active fastening material, the portion at the anchor end configured to have a first shear strength and the portion at the user end configured to have a second shear strength, the first shear strength being greater than the second shear strength.

As discussed above regarding claim 11, the provision of a fastener with opposite ends having different capabilities permits each end to better meet forces to which it is exposed at its respective location. The anchor end and user end (i.e., back and front, respectively) are typically exposed to different magnitudes of force. The present invention permits efficient tailoring of strength capability to promote cost-effective manufacturing, conserve materials, and avoid inefficiency. The surface area of active fastening material on the anchor end of the fastener is larger than the surface area of active fastening material on the user end.

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Kuehn fails to show or suggest a fastener with differing ends. Instead, Kuehn's strap is conventional and has identical end configurations. Accordingly, Applicants respectfully request that the rejection of claim 55 be withdrawn. Claims 24-33, 35, and 56, depending directly or indirectly from claim 55, are patentable for, among other reasons, the same reasons as claim 55.

D. Claim 62

Applicants have amended claim 62 similarly as claim 52. As amended, claim 62 recites, among other elements:

at least one fastener comprising a single piece of flexible material having an active fastening surface extending continuously thereon, at least a portion of the active fastening surface being located on the fastener for fastening to said article on landing material located generally at said first waist region and at least one other portion of the active fastening material being located on the fastener for fastening to said article on landing material located generally at said second waist region to secure said article on a wearer, the active fastening surface comprising an active fastening material different than said landing material, the active fastening material comprising one of a plurality of hooks and a plurality of loops, the landing material comprising the other of a plurality of hooks and a plurality of loops, said fastening material being releasably engageable with the landing material of the article.

Similar to what was discussed above regarding claim 52, Kuehn et al. fail to show or suggest a fastener having an active fastening surface extending continuously on the fastener and comprising an active fastening material different than a landing

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material on the article. The fastening material on Kuehn's straps is identical to a landing material on the article: both are loops. There is no disclosure of an article comprising active fastening material extending continuously on the fastener and comprising one of hooks and loops, and landing material comprising the other of hooks and loops.

Since the disclosure of Kuehn neither discloses nor suggests the article recited in amended claim 62, Applicants request that the rejection be withdrawn.

E. Claims 63, 37-51, 61, and 64

Applicants have amended claim 63 herein to incorporate the requirement formerly in claim 58 and to clarify differences between the present invention and the prior art, including particularly Keuhn. As amended, claim 63 recites a disposable absorbent article having, among other elements:

at least one fastener comprising a single piece of flexible material comprising an active fastening material; and
an adhesive on one of the fastener, first region, and second waist region;

wherein a first portion of the active fastening material is located on the fastener for fastening engagement with said article generally at said first waist region and a second portion of the active fastening material is located on the fastener for fastening engagement with said article generally at said second waist region to secure said article on a wearer, said fastener being affixed to said article generally at said first portion of the active fastening material by both said active fastening material and by the adhesive which augments said active fastening material.

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The provision of a fastener which is affixed by two types of connectors augments the reliability and grip of the fastening system. That keeps the fastener flush against the outer cover and inhibits peeling of fastener from the outer cover. The fastener has both an active fastening material (e.g., hooks) and an adhesive. One or more adhesive beads are applied on the inside surface of each fastener.

Kuehn fails to show or suggest the article recited in claim 63. Kuehn shows a conventional connection by hooks only. Accordingly, Applicants respectfully request that the rejection of claim 63 be withdrawn. Claims 37-51, 61, and 64, depending directly or indirectly from claim 63, are patentable for, among other reasons, the same reasons as claim 63.

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Conclusion

In view of the foregoing, favorable consideration and allowance of claims 2-5, 8, 9, 11-22, 24-33, 35, 37-56, 61, 63 and 64 as now presented are respectfully requested.

Respectfully submitted,



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